

DE technologies showcased at exhibit

by Rich Garcia, Directed Energy Directorate

KIRTLAND AIR FORCE BASE, N.M. — Two directed energy technologies from Kirtland Air Force Base, N.M., were showcased at an international exhibit held during October.

An estimated 13,000 top space leaders, scientists and engineers from around the world attended the once-each-decade World Space Congress, at which the Air Force Research Laboratory's Directed Energy Directorate showed examples of its world-class telescope capabilities and its research into fiber laser technology.

The directorate's largest telescope — a 3.67-meter telescope in Maui, Hawaii, was displayed in the form of a model. Also shown was a video of various satellites photographed by earth-based telescopes. The video was taken with sophisticated electro-optic equipment and techniques, pioneered by directorate scientists, which minimize or eliminate optical distortions caused by Earth's atmosphere.

Also shown was Fiber Laser technology that offers the potential for weapons class lasers small enough to fit on fighter aircraft. A microscope allowed visitors to see a special material running through the center of a fiber. The material helps laser light perpetuate and gather strength as it travels through the fiber — the longer the fiber, the more powerful the light exiting at the far end of the fiber.

The Directed Energy Directorate conducts research on energies such as lasers and microwaves to evaluate their use as potential weapons sources. @